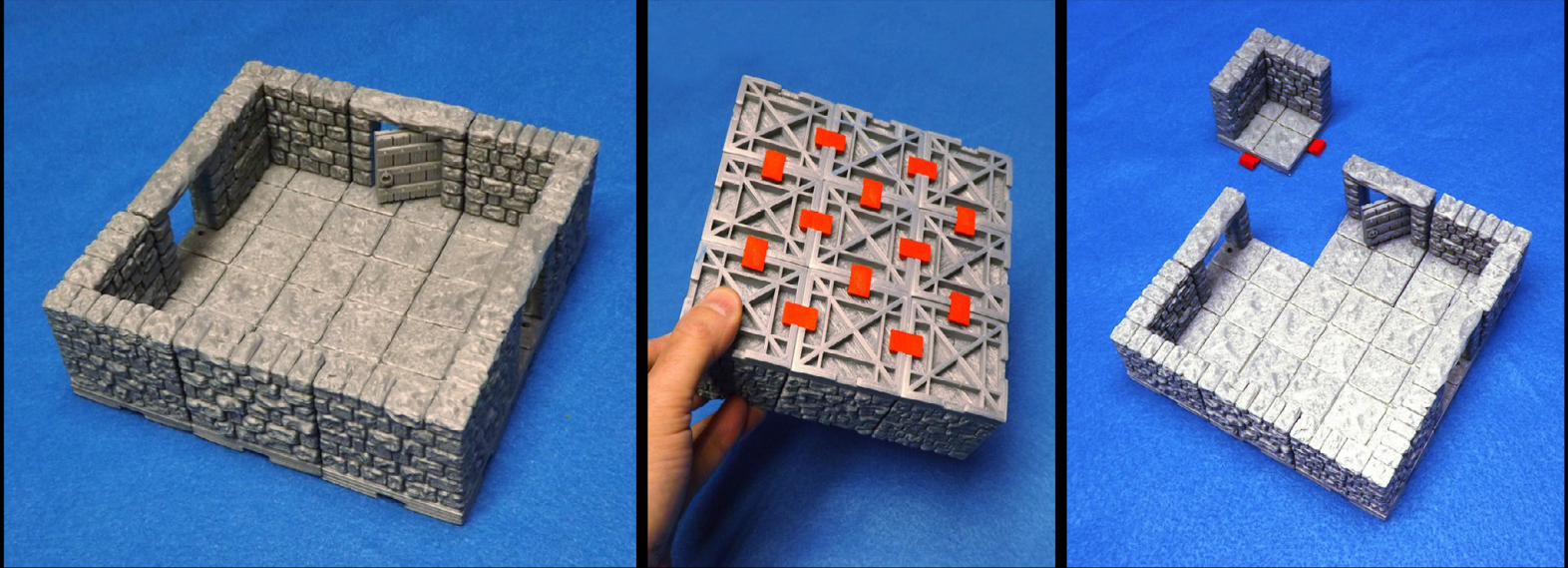


# DRAGONLOCK

TERRAIN FOR YOUR 3D PRINTER



Miniatures by [www.reapermini.com](http://www.reapermini.com)

## EXPANSION SET 7

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## Getting Started

Welcome to the DRAGONLOCK™ terrain system. This instruction manual will outline some basic materials you will need for 3D printing these models, specific printing information for the models in this set, and links to additional resources.

For more information on getting started with 3D printing, help with choosing a printer, settings for many popular printers, troubleshooting, and more; please visit our 3D Printer forums:

<http://fatdragongames.proboards.com/board/21/3d-printing-dragonlock-terrain>

For painting tutorials on these and other models in the DRAGONLOCK™ product line, please visit our Youtube channel:

<https://www.youtube.com/channel/UC5Lbnd97HV3rU98gcwHklzQ>

## Basic Tools and Materials



For gluing models with multiple pieces together, we have found that Gorilla Glue works great (especially the 'gel' type.)



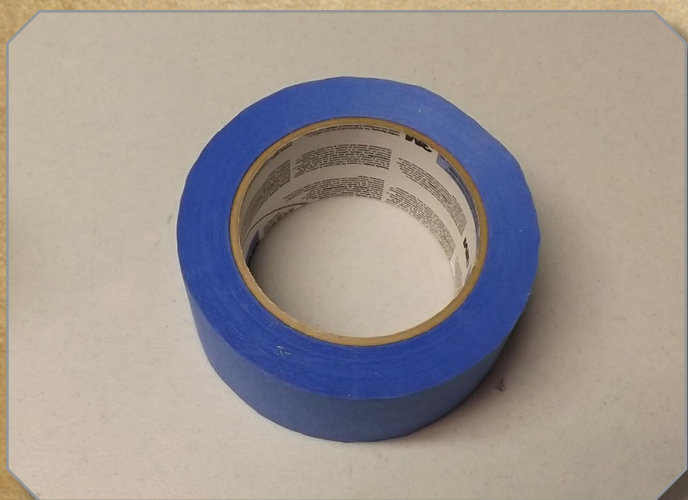
While not necessary, it helps to have a pair of small tweezers on hand. You'll find yourself using them often to pull odd strands of plastic off the model, getting small bits of plastic out of the printer, etc.



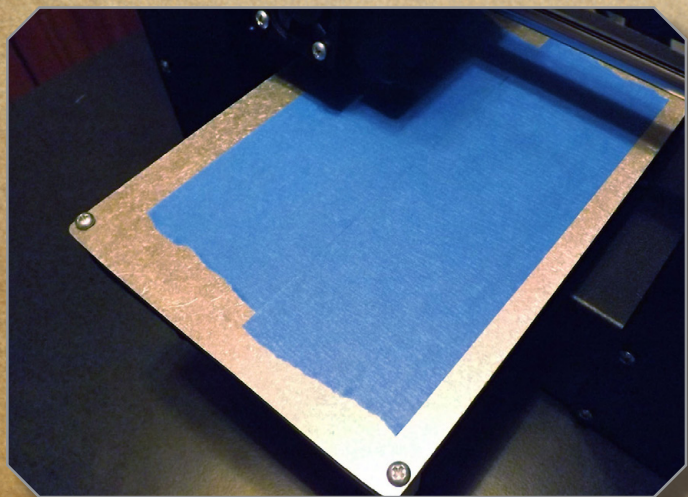
# DRAGONLOCK



Absolutely essential is a small metal spatula to help remove models from your build plate. We've found that ones like this from art supply aisles at craft stores work great and should only cost you a few dollars.



When printing PLA on a non-heated build plate, applying blue painter tape to your build-plate works great to help the plastic adhere.



To make your print stick as well as possible, you can wipe off newly applied tape with a paper towel that has a little rubbing alcohol on it (the tape has a wax coating on the back that sometimes inhibits the plastic from properly sticking to it).



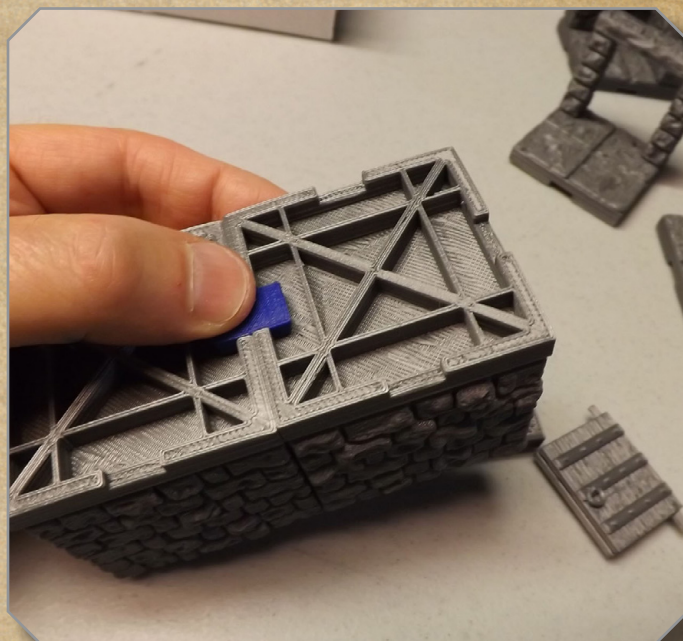
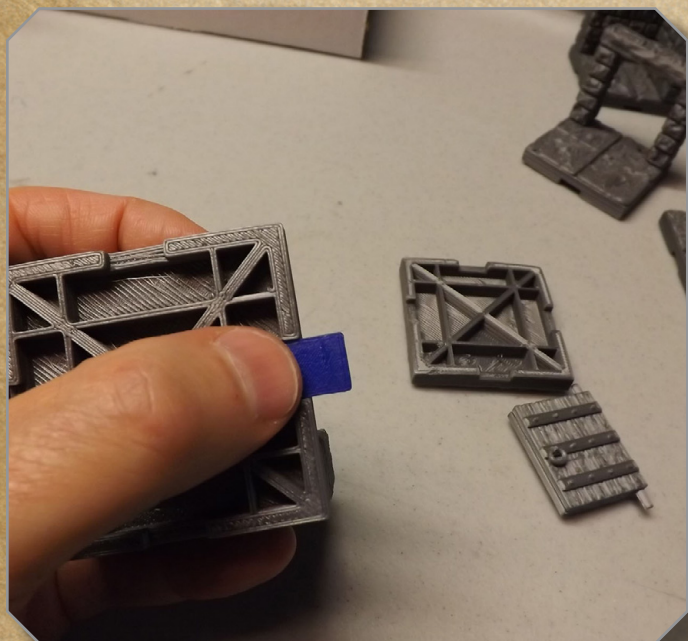


## General printing tips for DRAGONLOCK™ models

With the wide variety of printers and filaments on the market, it isn't possible for us to list printer settings that will work with multiple machines. Please visit the Fat Dragon Games forums for printer-specific tips and information:

<http://fatdragongames.proboards.com/board/21/3d-printing-dragonlock-terrain>

## Using the DRAGONLOCK™ clips



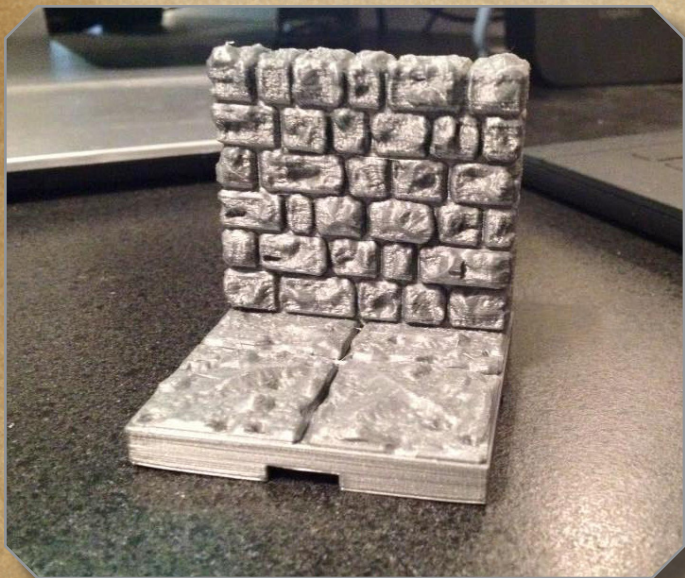
When linking (especially with newly printed pieces that haven't been broken in), fit the clip completely in the slot on one model (left photo), then slide the second wall model into the clip while maintaining pressure with your thumb to hold the clip in place. It takes a little practice, but once you get the hang of it, clipping pieces together is easy. When linking together a room, we recommend creating individual rows, then linking those together (e.g., if you need a 3x3 piece room, link together three rows of three pieces each first, then attach the rows together, rather than trying to add one piece at a time to create the room.)

**NOTE:** Because there will always be a small variation between different makes of printers, we recommend that you print a single clip to try, and if you find that your clip is too tight, two optional longer clips are also included. Try printing one of each and see which works best before printing large amounts.



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## Printing on unheated beds and warping issues



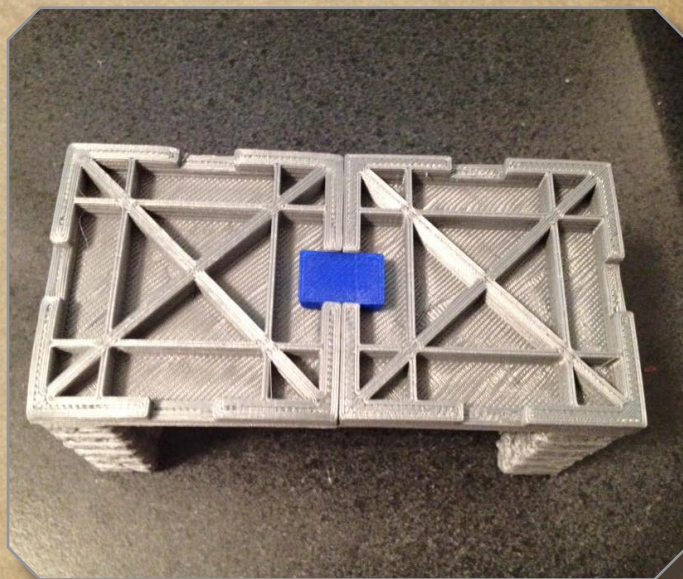
Warping when printing with PLA can be greatly reduced by using blue painters tape (wiped off with rubbing alcohol after first applying to the bed) and careful attention to printing temperatures and fan cooling. The above model was made on a Printbot Play, 205°, and fans on 100% at 1.0 mm high.



This model was intentionally warped, being printed on old tape, temperature set to 220°, and no cooling fans. Even with severe warping as shown above, your Dragonlock™ model will work just fine and link to adjacent models.



Because the printer smooths the warping out as it builds successive layers, by the time the upper face of the floor is printed, it is perfectly level regardless of warping below.



The Dragonlock™ base is designed to direct contraction stress to the corners, where it will not affect linking. Both pieces, regardless of warping, link tightly.



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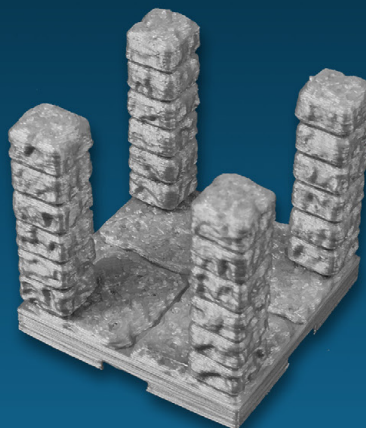
Wall with Window



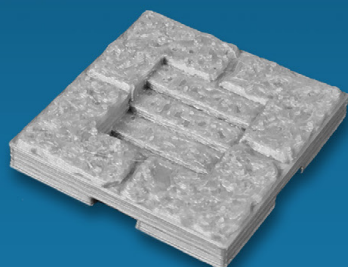
Wall with Murder Holes



Pillars (4)



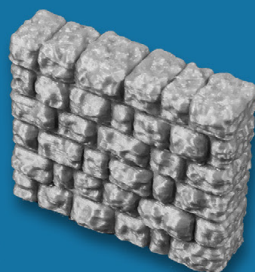
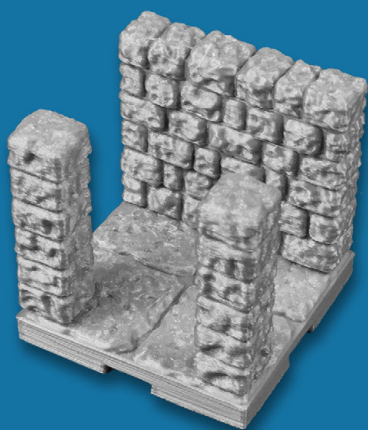
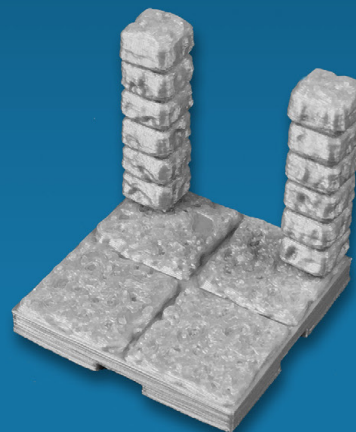
Stair Tile



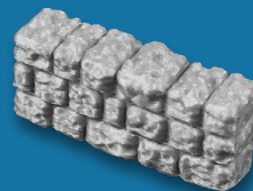
Pillars (3)



Pillars (2)



Solo Wall Full



Solo Wall Half

Narrow 'T'